CLAIMS

1. A derivative of GLP-1(7-C), wherein C is 35 or 36 which derivative has just one lipophilic substituent which is attached to the C-terminal amino acid residue, provided that said derivative is not selected from:

$Arg^{26,34}Lys^{36}(N^{\varepsilon}$-(ω-carboxynonadecanoyl))-GLP-1(7-36)-OH,

$Arg^{26,34}Lys^{36}$ (N^{ε}-(ω–carboxyheptadecanoyl))-GLP-1(7-36)-OH,

$Arg^{26,34}Lys^{36}$ (N^{ε}-(ω–carboxyundecanoyl))-GLP-1(7-36)-OH,

$Arg^{26,34}Lys^{36}$ (N^{ε}-(ω–carboxyheptanoyl))-GLP-1(7-36)-OH,

$Arg^{26,34}Lys^{36}$ (N^{ε}-(ω–carboxyheptanoyl))-GLP-1(7-36)-OH.

2. A GLP-1 derivative according to any one of the preceding claims, wherein the lipophilic substituent comprises from 4 to 40 carbon atoms, more preferred from 8 to 25 carbon atoms.

3. A GLP-1 derivative according to any one of the preceding claims, wherein a lipophilic substituent is attached to an amino acid residue in such a way that a carboxyl group of the lipophilic substituent forms an amide bond with an amino group of the amino acid residue.

4. A GLP-1 derivative according to any one of the claims 1-2, wherein a lipophilic substituent is attached to an amino acid residue in such a way that an amino group of the lipophilic substituent forms an amide bond with a carboxyl group of the amino acid residue.

5. A GLP-1 derivative according to any one of the preceding claims, wherein the lipophilic substituent is attached to the parent peptide by means of a spacer.

6. A GLP-1 derivative according to claim 5, wherein the spacer is an unbranched alkane α,ω-dicarboxylic acid group having from 1 to 7 methylene groups, preferably two methylene groups, which form a bridge between an amino group of the parent peptide and an amino group of the lipophilic substituent.

7. A GLP-1 derivative according to claim 5, wherein the spacer is an amino acid residue except Cys, or a dipeptide such as Gly-Lys.

8. A GLP-1 derivative according to claim 7, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of Lys or a dipeptide containing a Lys residue, and the other amino group of the Lys spacer or a dipeptide spacer containing a Lys residue forms an amide bond with a carboxyl group of the lipophilic substituent.

9. A GLP-1 derivative according to claim 7, wherein an amino group of the parent peptide forms an amide bond with a carboxylic group of the amino acid residue or dipeptide spacer, and an amino group of the amino acid residue or dipeptide spacer forms an amide bond with a carboxyl group of the lipophilic substituent.

10. A GLP-1 derivative according to claim 7, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of the amino acid residue spacer or dipeptide spacer, and a carboxyl group of the amino acid residue spacer or dipeptide spacer forms an amide bond with an amino group of the lipophilic substituent.

11. A GLP-1 derivative according to claim 7, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of a spacer which is Asp or Glu, or a dipeptide spacer containing an Asp or Glu residue, and a carboxyl group of the spacer forms an amide bond with an amino group of the lipophilic substituent.

12. A GLP-1 derivative according to any one of the preceding claims, wherein the lipophilic substituent comprises a partially or completely hydrogenated cyclopentanophenathrene skeleton.

13. A GLP-1 derivative according to any of the claims 1-11, wherein the lipophilic substituent is an straight-chain or branched alkyl group.

14. A GLP-1 derivative according to any of the claims 1-11 wherein the lipophilic substituent is the acyl group of a straight-chain or branched fatty acid.

15. A GLP-1 derivative according to claim 14 wherein the acyl group is selected from the group comprising $CH_3(CH_2)_nCO$-, wherein n is 4 to 38, preferably $CH_3(CH_2)_6CO$-, $CH_3(CH_2)_8CO$-, $CH_3(CH_2)_{10}CO$-, $CH_3(CH_2)_{12}CO$-, $CH_3(CH_2)_{14}CO$-, $CH_3(CH_2)_{16}CO$-, $CH_3(CH_2)_{18}CO$-, $CH_3(CH_2)_{20}CO$- and $CH_3(CH_2)_{22}CO$-.

16. A GLP-1 derivative according to any one of the claims 1-11 wherein the lipophilic substituent is an acyl group of a straight-chain or branched alkane α,ω-dicarboxylic acid.

17. A GLP-1 derivative according to claim 16 wherein the acyl group is selected from the group comprising $HOOC(CH_2)_mCO$-, wherein m is from 4 to 38, preferably from 4 to 24, more preferred selected from the group comprising $HOOC(CH_2)_{14}CO$-, $HOOC(CH_2)_{16}CO$-, $HOOC(CH_2)_{18}CO$-, $HOOC(CH_2)_{20}CO$- and $HOOC(CH_2)_{22}CO$-.

18. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_p((CH_2)_qCOOH)CHNH\text{-}CO(CH_2)_2CO$-, wherein p and q are integers and p+q is an integer of from 8 to 33, preferably from 12 to 28.

19. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_rCO\text{-}NHCH(COOH)(CH_2)_2CO$-, wherein r is an integer of from 10 to 24.

20. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_sCO\text{-}NHCH((CH_2)_2COOH)CO$-, wherein s is an integer of from 8 to 24.

21. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}CO(CH_2)_uCH_3$, wherein u is an integer of from 8 to 18.

22. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}COCH((CH_2)_2COOH)NH\text{-}CO(CH_2)_wCH_3$, wherein w is an integer of from 10 to 16.

23. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}CO(CH_2)_2CH(COOH)NH\text{-}CO(CH_2)_xCH_3$, wherein x is an integer of from 10 to 16.

24. A GLP-1 derivative according to any one of the claims 1-11, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}CO(CH_2)_2CH(COOH)NH\text{-}CO(CH_2)_yCH_3$, wherein y is zero or an integer of from 1 to 22.

25. A GLP-1 derivative according to any of claims 1-24, wherein the parent peptide is selected from the group comprising GLP-1(1-45) or an analogue or a fragment thereof.

26. A GLP-1 derivative according to claim 25, wherein the parent peptide is selected from the group comprising GLP-1(7-35); GLP-1(7-36); GLP-1(7-36)amide; GLP-1(7-37); GLP-1(7-38); GLP-1(7-39); GLP-1(7-40) and GLP-1(7-41) and an analogue thereof.

27. A GLP-1 derivative according to claim 25, wherein the parent peptide is selected from the group comprising GLP-1(1-35); GLP-1(1-36); GLP-1(1-36)amide; GLP-1(1-37); GLP-1(1-38); GLP-1(1-39); GLP-1(1-40); GLP-1(1-41) and an analogue thereof.

28. A GLP-1 derivative according to any of the preceding claims wherein the designation analogue comprises derivatives wherein a total of up to fifteen, preferably up to ten amino acid residues have been exchanged with any α-amino acid residue.

29. A GLP-1 derivative according to any of the preceding claims wherein the designation analogue comprises derivatives wherein a total of up to fifteen, preferably up to ten amino acid residues have been exchanged with any α-amino acid residue which can be coded for by the genetic code.

30. A GLP-1 derivative according to any of the preceding claims wherein the designation analogue comprises derivatives wherein a total of up to six amino acid residues have been exchanged with any α-amino acid residue which can be coded for by the genetic code.

31. A GLP-1 derivative according to any of the preceding claims, wherein the parent peptide is selected from the group comprising Arg^{26}-GLP-1(7-37); Arg^{34}-GLP-1(7-37); Lys^{36}-GLP-1(7-37); $Arg^{26,34}Lys^{36}$-GLP-1(7-37); $Arg^{26,34}Lys^{38}$GLP-1(7-38); $Arg^{26,34}Lys^{39}$-GLP-1(7-39); $Arg^{26,34}Lys^{40}$-GLP-1(7-40); $Arg^{26}Lys^{36}$-GLP-1(7-37); $Arg^{34}Lys^{36}$-GLP-1(7-37); $Arg^{26}Lys^{39}$-GLP-1(7-39); $Arg^{34}Lys^{40}$-GLP-1(7-40); $Arg^{26,34}Lys^{36,39}$-GLP-1(7-39); $Arg^{26,34}Lys^{36,40}$-GLP-1(7-40); $Gly^{8}Arg^{26}$-GLP-1(7-37); $Gly^{8}Arg^{34}$-GLP-1(7-37); $Gly^{8}Lys^{36}$-GLP-1(7-37); $Gly^{8}Arg^{26,34}Lys^{36}$-GLP-1(7-37); $Gly^{8}Arg^{26,34}Lys^{39}$-GLP-1(7-39); $Gly^{8}Arg^{26,34}Lys^{40}$-GLP-1(7-40); $Gly^{8}Arg^{26}Lys^{36}$-GLP-1(7-37); $Gly^{8}Arg^{34}Lys^{36}$-GLP-1(7-37); $Gly^{8}Arg^{26}Lys^{39}$-GLP-1(7-39); $Gly^{8}Arg^{34}Lys^{40}$-GLP-1(7-40); $Gly^{8}Arg^{26,34}Lys^{36,39}$-GLP-1(7-39) and $Gly^{8}Arg^{26,34}Lys^{36,40}$-GLP-1(7-40).

32. A GLP-1 derivative according to any of the claims 1-31, wherein the parent peptide is selected from the group comprising $Arg^{26,34}Lys^{38}$GLP-1(7-38); $Arg^{26,34}Lys^{39}$GLP-1(7-39);

$Arg^{26,34}Lys^{40}$GLP-1(7-40); $Arg^{26,34}Lys^{41}$GLP-1(7-41); $Arg^{26,34}Lys^{42}$GLP-1(7-42); $Arg^{26,34}Lys^{43}$GLP-1(7-43); $Arg^{26,34}Lys^{44}$GLP-1(7-44); $Arg^{26,34}Lys^{45}$GLP-1(7-45); $Arg^{26,34}Lys^{38}$GLP-1(1-38); $Arg^{26,34}Lys^{39}$GLP-1(1-39); $Arg^{26,34}Lys^{40}$GLP-1(1-40); $Arg^{26,34}Lys^{41}$GLP-1(1-41); $Arg^{26,34}Lys^{42}$GLP-1(1-42); $Arg^{26,34}Lys^{43}$GLP-1(1-43); $Arg^{26,34}Lys^{44}$GLP-1(1-44); $Arg^{26,34}Lys^{45}$GLP-1(1-45); $Arg^{26,34}Lys^{38}$GLP-1(2-38); $Arg^{26,34}Lys^{39}$GLP-1(2-39); $Arg^{26,34}Lys^{40}$GLP-1(2-40); $Arg^{26,34}Lys^{41}$GLP-1(2-41); $Arg^{26,34}Lys^{42}$GLP-1(2-42); $Arg^{26,34}Lys^{43}$GLP-1(2-43); $Arg^{26,34}Lys^{44}$GLP-1(2-44); $Arg^{26,34}Lys^{45}$GLP-1(2-45); $Arg^{26,34}Lys^{38}$GLP-1(3-38); $Arg^{26,34}Lys^{39}$GLP-1(3-39); $Arg^{26,34}Lys^{40}$GLP-1(3-40); $Arg^{26,34}Lys^{41}$GLP-1(3-41); $Arg^{26,34}Lys^{42}$GLP-1(3-42); $Arg^{26,34}Lys^{43}$GLP-1(3-43); $Arg^{26,34}Lys^{44}$GLP-1(3-44); $Arg^{26,34}Lys^{45}$GLP-1(3-45); $Arg^{26,34}Lys^{38}$GLP-1(4-38); $Arg^{26,34}Lys^{39}$GLP-1(4-39); $Arg^{26,34}Lys^{40}$GLP-1(4-40); $Arg^{26,34}Lys^{41}$GLP-1(4-41); $Arg^{26,34}Lys^{42}$GLP-1(4-42); $Arg^{26,34}Lys^{43}$GLP-1(4-43); $Arg^{26,34}Lys^{44}$GLP-1(4-44); $Arg^{26,34}Lys^{45}$GLP-1(4-45); $Arg^{26,34}Lys^{38}$GLP-1(5-38); $Arg^{26,34}Lys^{39}$GLP-1(5-39); $Arg^{26,34}Lys^{40}$GLP-1(5-40); $Arg^{26,34}Lys^{41}$GLP-1(5-41); $Arg^{26,34}Lys^{42}$GLP-1(5-42); $Arg^{26,34}Lys^{43}$GLP-1(5-43); $Arg^{26,34}Lys^{44}$GLP-1(5-44); $Arg^{26,34}Lys^{45}$GLP-1(5-45); $Arg^{26,34}Lys^{38}$GLP-1(6-38); $Arg^{26,34}Lys^{39}$GLP-1(6-39); $Arg^{26,34}Lys^{40}$GLP-1(6-40); $Arg^{26,34}Lys^{41}$GLP-1(6-41); $Arg^{26,34}Lys^{42}$GLP-1(6-42); $Arg^{26,34}Lys^{43}$GLP-1(6-43); $Arg^{26,34}Lys^{44}$GLP-1(6-44); $Arg^{26,34}Lys^{45}$GLP-1(6-45); $Arg^{26}Lys^{38}$GLP-1(1-38); $Arg^{34}Lys^{38}$GLP-1(1-38); $Arg^{26,34}Lys^{36,38}$GLP-1(1-38); $Arg^{26}Lys^{38}$GLP-1(7-38); $Arg^{34}Lys^{38}$GLP-1(7-38); $Arg^{26,34}Lys^{36,38}$GLP-1(7-38); $Arg^{26,34}Lys^{38}$GLP-1(7-38); $Arg^{26}Lys^{39}$GLP-1(1-39); $Arg^{34}Lys^{39}$GLP-1(1-39); $Arg^{26,34}Lys^{36,39}$GLP-1(1-39); $Arg^{26}Lys^{39}$GLP-1(7-39); $Arg^{34}Lys^{39}$GLP-1(7-39) and $Arg^{26,34}Lys^{36,39}$GLP-1(7-39).

33. A pharmaceutical composition comprising a GLP-1 derivative according to the present invention and a pharmaceutically acceptable vehicle or carrier.

34. Use of a GLP-1 derivative according to the present invention for the preparation of a medicament which has a protracted profile of action relative to GLP-1(7-37).

35. Use of a GLP-1 derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of non-insulin dependent diabetes mellitus.

36. Use of a GLP-1 derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of insulin dependent diabetes mellitus.

37. Use of a GLP-1 derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of obesity.

38. Use of a GLP-1 derivative according to the present invention for the preparation of a medicament for use in the treatment of diabetes in a regimen which additionally comprises treatment with another antidiabetic agent.

39. The use according to claim 38, wherein the antidiabetic agent is human insulin or an analogue or a derivative thereof.

40. The use according to claim 38, wherein the antidiabetic agent is an oral hypoglycaemic agent.

41. The use according to claim 40, wherein the oral hypoglycaemic agent is a sulfonylurea, preferably tolbutamide, glibenclamide, glipizide or gliclazide.

42. The use according to claim 40, wherein the oral hypoglycaemic agent is a biguanide, preferably metformin.

43. The use according to claim 40, wherein the oral hypoglycaemic agent is a thiazolidinedione, preferably troglitazone or ciglitazone.

44. The use according to claim 40, wherein the oral hypoglycaemic agent is a glucosidase inhibitor, preferably acarbose.

45. The use according to claim 40, wherein the oral hypoglycaemic agent is an agent acting on the ATP-dependent potassium channel of the ß-cells, preferably glibenclamide, glipizide, gliclazide or repaglinide.

46. The use according to any one of claims 38 to 45, wherein the GLP-1 derivative and said other antidiabetic agent are administered so as to obtain a synergistic effect.

47. An exendin derivative wherein at least one amino acid residue of the parent peptide has a lipophilic substituent attached.

48. An exendin derivative according to claim 47, wherein only one lipophilic substituent is present.

49. An exendin derivative according to claim 48, wherein the lipophilic substituent is attached to the N-terminal amino acid residue.

50. An exendin derivative according to claim 48, wherein the lipophilic substituent is attached to the C-terminal amino acid residue.

51. An exendin derivative according to claim 48, wherein the lipophilic substituent is attached to an amino acid residue which is not the N-terminal or C-terminal amino acid residue.

52. An exendin derivative according to claim 47, wherein two lipophilic substituents are present.

53. An exendin derivative according to claim 52, wherein one of the lipophilic substituents is attached to the N-terminal amino acid residue while the other is attached to the C-terminal amino acid residue.

54. An exendin derivative according to claim 52, wherein one of the lipophilic substituents is attached to the C-terminal amino acid residue while the other is attached to an amino acid residue which is not the N-terminal or C-terminal amino acid residue.

55. An exendin derivative according to claim 52, wherein both lipophilic substituents are attached to amino acid residues which are neither the N-terminal nor the C-terminal amino acid residue.

56. An exendin derivative according to any one of claims 47 to 55, wherein the lipophilic substituent comprises from 4 to 40 carbon atoms, more preferred from 8 to 25 carbon atoms.

57. An exendin derivative according to any one of claims 47 to 56, wherein a lipophilic substituent is attached to an amino acid residue in such a way that a carboxyl group of the lipophilic substituent forms an amide bond with an amino group of the amino acid residue.

58. An exendin derivative according to any one of the claims 47 to 56, wherein a lipophilic substituent is attached to an amino acid residue in such a way that an amino group of the lipophilic substituent forms an amide bond with a carboxyl group of the amino acid residue.

59. An exendin derivative according to any one of the claims 47 to 58, wherein the lipophilic substituent is attached to the parent peptide by means of a spacer.

60. An exendin derivative according to claim 59, wherein the spacer is an unbranched alkane α,ω-dicarboxylic acid group having from 1 to 7 methylene groups, preferably two methylene groups, which form a bridge between an amino group of the parent peptide and an amino group of the lipophilic substituent.

61. An exendin derivative according to claim 59, wherein the spacer is an amino acid residue except cys, or a dipeptide such as gly-lys.

62. An exendin derivative according to claim 59, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of lys or a dipeptide containing a lys residue, and the other amino group of the lys spacer or a dipeptide spacer containing a lys residue forms an amide bond with a carboxyl group of the lipophilic substituent.

63. An exendin derivative according to claim 59, wherein an amino group of the parent peptide forms an amide bond with a carboxylic group of the amino acid residue or dipeptide spacer, and an amino group of the amino acid residue or dipeptide spacer forms an amide bond with a carboxyl group of the lipophilic substituent.

64. An exendin derivative according to claim 59, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of the amino acid residue spacer or dipeptide spacer, and a carboxyl group of the amino acid residue spacer or dipeptide spacer forms an amide bond with an amino group of the lipophilic substituent.

65. An exendin derivative according to claim 59, wherein a carboxyl group of the parent peptide forms an amide bond with an amino group of a spacer which is asp or glu, or a dipeptide spacer containing an asp or glu residue, and a carboxyl group of the spacer forms an amide bond with an amino group of the lipophilic substituent.

66. An exendin derivative according to any one the claims 47 to 65, wherein the lipophilic substituent comprises a partially or completely hydrogenated cyclopentanophenathrene skeleton.

67. An exendin derivative according to any of the claims 47 to 65, wherein the lipophilic substituent is an straight-chain or branched alkyl group.

68. An exendin derivative according to any of the claims 47 to 65, wherein the lipophilic substituent is the acyl group of a straight-chain or branched fatty acid.

69. An exendin derivative according to claim 68 wherein the acyl group is selected from the group comprising $CH_3(CH_2)_nCO$-, wherein n is 4 to 38, preferably $CH_3(CH_2)_6CO$-, $CH_3(CH_2)_8CO$-, $CH_3(CH_2)_{10}CO$-, $CH_3(CH_2)_{12}CO$-, $CH_3(CH_2)_{14}CO$-, $CH_3(CH_2)_{16}CO$-, $CH_3(CH_2)_{18}CO$-, $CH_3(CH_2)_{20}CO$- and $CH_3(CH_2)_{22}CO$-.

70. An exendin derivative according to any one of the claims 47 to 65 wherein the lipophilic substituent is an acyl group of a straight-chain or branched alkane α,ω-dicarboxylic acid.

71. An exendin derivative according to claim 70 wherein the acyl group is selected from the group comprising $HOOC(CH_2)_mCO$-, wherein m is from 4 to 38, preferably from 4 to 24, more preferred selected from the group comprising $HOOC(CH_2)_{14}CO$-, $HOOC(CH_2)_{16}CO$-, $HOOC(CH_2)_{18}CO$-, $HOOC(CH_2)_{20}CO$- and $HOOC(CH_2)_{22}CO$-.

72. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_p((CH_2)_qCOOH)CHNH\text{-}CO(CH_2)_2CO$-, wherein p and q are integers and p+q is an integer of from 8 to 33, preferably from 12 to 28.

73. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_rCO\text{-}NHCH(COOH)(CH_2)_2CO$-, wherein r is an integer of from 10 to 24.

74. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula $CH_3(CH_2)_sCO\text{-}NHCH((CH_2)_2COOH)CO$-, wherein s is an integer of from 8 to 24.

75. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}CO(CH_2)_uCH_3$, wherein u is an integer of from 8 to 18.

76. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula $\text{-}NHCH(COOH)(CH_2)_4NH\text{-}COCH((CH_2)_2COOH)NH\text{-}CO(CH_2)_wCH_3$, wherein w is an integer of from 10 to 16.

77. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula -NHCH(COOH)$(CH_2)_4$NH-CO$(CH_2)_2$CH(COOH)NH-CO$(CH_2)_x$$CH_3$, wherein x is an integer of from 10 to 16.

78. An exendin derivative according to any one of the claims 47 to 65, wherein the lipophilic substituent is a group of the formula -NHCH(COOH)$(CH_2)_4$NH-CO$(CH_2)_2$CH(COOH)NH-CO$(CH_2)_y$$CH_3$, wherein y is zero or an integer of from 1 to 22.

79. An exendin derivative according to any of the claims 47 to 78, wherein the designation analogue comprises derivatives wherein a total of up to fifteen, preferably up to ten amino acid residues have been exchanged with any α-amino acid residue.

80. An exendin derivative according to any of the claims 47 to 79, wherein the designation analogue comprises derivatives wherein a total of up to fifteen, preferably up to ten amino acid residues have been exchanged with any α-amino acid residue which can be coded for by the genetic code.

81. An exendin derivative according to any of the claims 47 to 80, wherein the designation analogue comprises derivatives wherein a total of up to six amino acid residues have been exchanged with any α-amino acid residue which can be coded for by the genetic code.

82. An exendin derivative according to any of the claims 47 to 81, wherein the parent peptide is HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGX, wherein X = P or Y, or a fragment or an analogue thereof.

83. An exendin derivative according to any of claims 47 to 81, wherein the parent peptide is HX1X2GTFITSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS, wherein X1X2 = SD or GE, or a fragment or an analogue thereof.

84. An exendin derivative according to any of claims 47 to 81, wherein the parent peptide is DLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS, or a fragment or an analogue thereof.

85. An exendin derivative according to claim 47, which is selected from
Arg^{18}, Leu^{20}, Gln^{34}, Lys^{33} (N^{ε}-(γ-aminobutyroyl(N^{α}-hexadecanoyl))) Exendin-4-(7-45)-NH_2,
Arg^{33}, Leu^{20}, Gln^{34}, Lys^{18} (N^{ε}-(γ-aminobutyroyl(N^{α}-hexadecanoyl))) Exendin-4-(7-45)-NH_2.

86. A pharmaceutical composition comprising an exendin derivative according to the present invention and a pharmaceutically acceptable vehicle or carrier.

87. Use of an exendin derivative according to the present invention for the preparation of a medicament which has a protracted profile of action relative to exendin.

88. Use of an exendin derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of non-insulin dependent diabetes mellitus.

89. Use of an exendin derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of insulin dependent diabetes mellitus.

90. Use of an exendin derivative according to the present invention for the preparation of a medicament with a protracted profile of action for the treatment of obesity.

91. A method of treating insulin dependent or non-insulin dependent diabetes mellitus in a patient in need of such a treatment, comprising administering to the patient a therapeutically effective amount of a exendin derivative according to the present invention together with a pharmaceutically acceptable carrier.

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A2 Add claims 92-123